Page 38, lines 25-32:

As illustrated in Fig. 10, hexameric peptides of different and known affinity to the "anti-glu" antibody were synthesized with a biotin anchoring group and heptameric gycyl linker. To prove the concept of the present invention, the biotinylated peptides (A through E) were spotted onto avidin-treated slides as described in the present disclosure. The slides were blocked with casein and probed with Cy5-labelled antiglu antibodies. The gradations in signal intensity correlate with the known differences (e.g., measured by direct ELISA) in affinity between the peptides and their cognate antibody probe.

In the Claims:

Please replace the pending claims with the following claim set. A marked-up version of the claims is attached.

1. An array of protein-binding agents stably attached to the surface of a solid support, said array comprising:

a solid substrate having a substantially planar surface;

a plurality of different protein-binding agents bound to said substrate, each of said protein-binding agents comprising,

an anchoring segment stably bound to the substrate surface,

a peptidomimetic protein-binding segment, and

a linker segment connecting and separating the anchoring and peptidomimetic segments.

2. The array of claim 1, wherein said substrate comprises a metal on said planar surface beneath said anchoring segment.

3. The array of claim 2, wherein said substrate is one of a glass, a plastic or a metal.

4. The array of claim 2, wherein said metal is one of aluminum, gold or titantium.

5. The array of claim 2, wherein said peptidomimetic segment is a peptoid.

6. The array of claim 2, wherein said linker segment is selected from the group consisting of C2 – C100 aliphatic chains, polyethylene oxide, and orthogonal peptidomimetic or peptide oligomers.

7. The array of claim 2, wherein said anchoring segment is a thiol.

8. The array of claim 2, wherein said anchoring segment is biotin.

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9. The array of claim 2, wherein said metal substrate surface is further coated with a functionalized one of an aminothiol and an aminosilane beneath said anchoring segment.

10. The array of claim 9, wherein said aminothiol or aminosilane is functionalized with a maleimide.

11. The array of claim 10, wherein said anchoring segment is a thiol.

12. The array of claim 9, wherein said aminothiol or aminosilane is functionalized with one of a hydrazide, aminooxy, N-hydroxysuccinimide, anhydride, aldehyde, disulfide, thiol, azide and phosphine.

13. The array of claim 9, wherein said metal substrate surface is further coated with an avidin protein beneath said anchoring segment.

14. The array of claim 13, wherein said avidin protein is selected from the group consisting of avidin, streptavidin, neutravidin and analogs.

15. The array of claim 13, wherein said anchoring group is biotin.

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16. The array of claim 13, wherein said avidin protein is attached to the metal substrate surface via an NHS-6-aminohexanoyl-6-aminohexanoyl-biotin moiety.

17. The array of claim 1, wherein said solid support has a substantially planar aluminum surface coated with a maleimide-functionalized aminothiol or aminosilane; and

said plurality of different protein-binding agents bound to said substrate each comprises,

a thiol substrate anchoring segment stably bound to the maleimide-presenting substrate surface,

a peptoid protein-binding segment, and

an aliphatic linker segment connecting and separating the anchoring and peptidomimetic segments.

18. The array of claim 17, wherein said maleimide-functionalized aminothiol or aminosilane comprises a spacer.

19. The array of claim 1, wherein said solid support has a substantially planar aluminum surface coated with an avidin-functionalized aminosilane or aminothiol; and

said plurality of different protein-binding agents bound to said substrate each comprises,

a biotin substrate anchoring segment stably bound to the avidin-presenting substrate surface,

a peptoid protein-binding segment, and

an orthogonal peptide linker segment connecting and separating the anchoring and peptidomimetic segments.

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20. The array of claim 19, wherein said avidin-functionalized aminosilane or aminothiol comprises an NHS-6-aminohexanoyl-6-aminohexanoyl-biotin moiety.

21-52. (cancelled)

53. A kit for use in performing a differential binding assay according to claim 43, said kit including an array comprising:

a solid substrate having a substantially planar surface;

a plurality of different protein-binding agents bound to said substrate, each of said protein-binding agents comprising,

an anchoring segment stably bound to the substrate surface,

a peptidomimetic protein-binding segment, and

a linker segment connecting and separating the anchoring and peptidomimetic segments.